

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

### **REMARKS**

Reconsideration of the application, as presently amended, is respectfully requested. Claims 1 – 7 are pending in this application. Claims 1 – 7 stand rejected. No new matter has been added.

### **Claim Amendments**

Claims 1, 5 and 7 have been amended to improve form in accordance with preferred U.S. practice. Approval and entry of the changes to the claims are respectfully requested.

### **Examiner's Response to Arguments**

At the outset, we note that the Examiner has repeated each of the rejections in view of the prior art set forth in the previous Office Action (see pages 2 - 7, items 1 - 4 of the current Office Action). The reasons why the arguments in the response filed January 26, 2004 were not considered persuasive are set forth in the *Response to Arguments*, on page 7, item 5 of the current Office Action.

The Examiner's response to the arguments set forth in the January 26, 2004 Amendment appears to be incomplete and somewhat unclear. Specifically, the Examiner's response is incomplete because it simply does not address each of applicants' arguments. The response is unclear because it refers to elements that are not found in the cited references.

For example, with respect to the rejection of claim 6, the Office Action states "examiner respectfully disagrees with the argument because besides the using of prior art to reject the

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

[claimed] invention, it is also using the mathematical expressions or the equations in the textbook to reject the claim" (see Office Action, page 7, lines 10-12).

However, the Examiner has failed to point out where the prior art discloses the relationship " $d/2 + w < D \tan \delta$ " recited in claim 6, as requested by applicants in the January 26, 2004 response. Moreover, it is unclear what "mathematical expressions or equations in the textbook" the Examiner is using to reject claim 6. In any event, even if the Examiner is aware of an equation or mathematical expression that is relevant to claim 6, the Examiner has not applied a reference teaching an equation or mathematical expression against the claims.

Further, with respect to independent claim 7, the Office Action failed to address any of applicants' arguments set forth in the January 26, 2004 response.

In view of the incomplete and unclear explanations as to why the previous arguments were not considered persuasive, we recommend conducting a personal interview with the Examiner to help us better understand the Examiner's position and to discuss the deficiencies in the Examiner's rejection.

Please advise whether conducting a personal interview with the Examiner is acceptable.

We note that the Examiner has discretion regarding whether to grant an interview after a final Office Action. Nevertheless, we still recommend trying to arrange an Examiner's Interview at this time. If the Examiner denies granting an Interview at this time, an alternative is to file a Request for Reconsideration (without amending the claims) or to file a Request for Continued Examination (including the attached proposed claim amendments, and a follow-up request for Examiner's Interview).

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

**Claim Rejections – 35 U.S.C. §102**

Claim 6 was rejected under 35 U.S.C. §102(e) as being anticipated by EP 0897161. For the reasons set forth in detail below, this rejection is respectfully traversed.

The present invention, as recited in claim 6, is directed to an optical scanning-type touch panel wherein the positions of the respective optical members are designed to, for example, eliminate unnecessary space for mounting, scan light within the scanning range and receive the reflected light, and receive only the recurrence reflected light even at the start of scanning (see, e.g., page 19, lines 4-11 of the present application). The optical members of the optical scanning-type touch panel recited in claim 6 satisfy the condition  $d/2 + w < D \tan \delta$ , where D is a distance from an optical scanning unit to a deflecting unit, w is a width on the deflecting unit from a path of the scanning light to an end on a predetermined region side, d is a beam width of the scanning light and  $\delta$  is a scanning start angle.

The Office Action asserts that Figs. 1, 3 and 5 of EP 0897161 disclose the invention recited in claim 6. However, EP 0897161 does not disclose or suggest the relationship  $d/2 + w < D \tan \delta$  between component optical members of an optical scanning-type touch panel, as recited in claim 6.

Moreover, the Office Action does not address where the relationship  $d/2 + w < D \tan \delta$  is disclosed or suggested by the EP 0897161 reference. Instead of finding the claimed relationship in a reference as required by §102, the Examiner has *supplied this feature*, which feature is clearly missing from the reference. More specifically, as set forth on page 3, line 8, the Office Action asserts that “*if we let*”  $w = 3\text{mm}$ ,  $D = 45\text{mm}$ ,  $d = 40\text{mm}$ ,  $\delta = 30$  degrees... the relationship

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

$d/2 + w < D \tan \delta$  is satisfied. As demonstrated by the language "if we let," the Examiner has improperly supplied the material missing from EP 0897161 by providing numerical values for the various distances, widths and angles recited in the claim in order to satisfy the claimed relationship.

It is well established that anticipation under §102 is established only if *all the elements* of an invention, as stated in the claim, are identically set forth in *a single* prior art reference. Moreover, it is not sufficient that each element be found somewhere in the reference, the elements must be "*arranged as in the claim.*" *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 703 F.2d 1452, 1458 (Fed.Cir. 1984).

Therefore, the rejection of claim 6 is improper under §102 because all of the claimed elements arranged as in the claim have not been found in a single prior art reference.

#### **Claim Rejections – 35 U.S.C. §103**

Claims 1-5 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over **Junkins et al.** (U.S. Patent No. 5,525,764) in view of **Brandt** (U.S. Patent No. 5,438,446). For the reasons set forth in detail below, this rejection is respectfully traversed.

#### **Claim 1**

With respect to independent claim 1, the Examiner maintains the same position set forth in the previous Office Action. Specifically, the Examiner recognizes that **Junkins et al.** do not disclose the claimed *deflecting unit for deflecting scanning light of an optical scanning unit, the*

Application No. 09/875,084

Amendment Under 37 C.F.R. §1.116 dated August 26, 2004

Response to the Office Action dated June 14, 2004

*deflecting unit having an asymmetric shape about an optical axis*, and asserts that it would have been obvious to one of ordinary skill in the art to combine **Junkins et al.** with a mirror deflector disclosed by **Brandt** to arrive at the claimed invention.

As discussed in the response filed January 26, 2004, **Junkins et al.** disclose a parabolic collector, e.g., 43, to deflect light from a scan mirror, e.g., 33A. However, the parabolic collector 43 is symmetrical with respect to an optical axis. The Examiner recognizes that **Junkins et al.** do not disclose or suggest a deflecting unit for deflecting scanning light of an optical scanning unit, the deflecting unit having an asymmetric shape about an optical axis.

The Office Action relies on Fig. 4 of **Brandt** to teach the claimed deflecting unit having an asymmetric shape about an optical axis, asserting that **Brandt** discloses an optical scanner having a deflecting unit (mirrors  $N_1$ , or  $N_2$ -IK<sub>2</sub>) that is asymmetrical through the optical axis ( $\theta_0$ - $\theta_1$ ) (see Office Action, page 7, lines 12-16).

It is respectfully submitted that **Brandt** does not alleviate the deficiencies of **Junkins et al.** Specifically, Fig. 4 of **Brandt** illustrates a portion of a facet of a polygon shaped rotating mirror (e.g., 20, Fig. 2), the facet having a coating (such as SiO<sub>2</sub>) designed to minimize reflectance variations in a range of incident light beam scanning angles (see, e.g., column 5, lines 45-54 and column 6, lines 40-47). A thickness  $T_1$  of the coating is chosen to minimize variations in reflectance over a range of angular displacement of the mirror in relation to a light source (see Abstract). More particularly, the coating thickness  $T_1$  is chosen such that a refractive index of the surrounding environment  $N_0$ , a refractive index of the coating  $N_1$ , and a refractive index of a

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

polished mirror surface N<sub>2</sub> minimize variations in reflectance components 51, 52 and 53 of an incident light beam 50 from the interfaces of the various layers.

Thus, the mirror shown in Fig. 4 of **Brandt** corresponds to a scanning unit (rotating mirror) and not the claimed deflecting unit.

Moreover, it is noted that  $\theta_0$  and  $\theta_1$  (shown in Fig. 4 as  $\theta_0$  and  $\theta_1$ ) are an angle of incidence and an angle of refraction, respectively, of an incident light beam 50 (see column 5, line 61 and column 7, lines 8- 10), and *not* an optical axis, as asserted by the Office Action. *There is no teaching or suggestion that the portion of the facet of the polygon-shaped rotating mirror shown in Fig. 4 has an asymmetrical shape about an optical axis.*

Furthermore, it is noted that the **Brandt** disclosure is *completely silent* regarding a written description of the coated mirror shown in Fig. 4 having an asymmetrical shape about an optical axis. The Examiner is relying on *only* the drawing figure (Fig. 4) to teach the claimed deflecting unit having an asymmetrical shape about an optical axis. However, as set forth in the Manual of Patent Examining Procedure MPEP §2125, drawings can anticipate claims only if they *clearly* show the structure which is claimed.

Fig. 4 is *not* to scale. Further, Fig. 4 neither shows the actual shape of the polygon mirror nor any optical axis. In other words, Fig. 4 does not *clearly* illustrate any of the features recited in claims 1-5.

Finally, there is no incentive or motivation for combining **Brandt** with **Junkins et al.** as required under §103. If the rotating mirror 20 shown in Fig. 4 of **Brandt** were combined with the laser scanning system of **Junkins et al.**, as suggested by the Examiner, the result would be a

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

system having the *symmetric* parabolic collector. There is simply no incentive for substituting the rotating mirror shown in Fig. 4 of **Brandt** for any element of **Junkins et al.**

### **Dependent Claims 2-5**

Each of claims 2-5 depend either directly or indirectly from claim 1 and distinguish over the cited prior art of the same reasons set forth above with respect to claim 1.

Moreover, each of claims 2-5 recite additional features not disclosed or suggested by the cited prior art. For example, claim 2 recites that the shape of the deflecting unit is asymmetrical in a scanning direction and claim 3 recites that the shape of the deflecting unit is asymmetrical in a height direction. The Office Action asserts that Fig. 4 of **Brandt** teaches the features recited in claims 2 and 3. However, Fig. 4 of **Brandt** does not illustrate a deflector having an asymmetrical shape in a scanning direction or a height direction. As noted above, the device shown in Fig. 4 is a scanning mirror, and not a deflector.

Further, with respect to claims 4 and 5, the Office Action asserts that these claims would have been obvious because they involve a “mere change in size or shape.” The Office Action cites *In re Rose*, 105 USPQ 237 (CCPA 1955). It is respectfully submitted that *In re Rose* was decided before 35 USC §103 was enacted, and is no longer applicable law. Specifically, *In re Rose* applied the old “standard of invention” test wherein it was determined whether the claimed subject matter rose to the “level of invention.” This is no longer the standard under §103.

Under §103, the Examiner must establish a *prima facie* case of obviousness. In establishing a *prima facie* case of obviousness, the Examiner must show, among other things,

Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings.

The Examiner has not provided the requisite motivation or suggestion for modifying the references to arrive at the invention recited in claims 4 and 5, other than to offer the conclusory statement that a change in size and shape is obvious. Therefore, the Examiner has not established a *prima facie* case of obviousness under §103.

#### Claim 7

It is respectfully submitted that the Office Action has not addressed applicants' arguments with respect to independent claim 7 set forth in the January 26, 2004 response.

In summary, **Brandt** does not disclose or suggest a protective film having an optimum thickness to *maximize* reflectance at an angle of incidence corresponding to a scanning angle at which a quantity of reflected light is a minimum. In contrast, **Brandt** discloses a SiO<sub>2</sub> film having an optimum thickness to *minimize* reflectance variations according to incident angles.

#### CONCLUSION

In view of the foregoing amendments and accompanying remarks, it is submitted that all pending claims are in condition for allowance. A prompt and favourable reconsideration of the rejection and an indication of allowability of all pending claims are earnestly solicited.



Application No. 09/875,084  
Amendment Under 37 C.F.R. §1.116 dated August 26, 2004  
Response to the Office Action dated June 14, 2004

If the Examiner believes that there are any remaining issues to be addressed, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,  
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